

## ABSTRACT

The tire valve stem cap remover of the present invention provides a device capable of accessing, loosening, retaining and reinstalling tire valve stem caps on plural arrangements of pneumatic tires mounted on an axel with the tires at the end of the axel. The main body of the present invention consists of an elongated cylindrical rod. The cap-engaging receptacle is comprised of a socket-type cylindrical receptacle with an open top end for receiving and engaging the tire valve stem cap. The cap-engaging receptacle is affixed to the top end of the elongated cylindrical rod.

## DETAILED DESCRIPTION OF THE PREFERED EMBODIMENT

Referring to FIGS 1 through 4 the tire valve stem cap remover of the present invention is shown. The tire stem valve cap remover includes an engaging receptacle 10 for removing, retaining, and reinstalling tire valve stem caps, and an elongated cylindrical rod 12 as the main body and a grip 14 for grasping and rotating the present invention during removal and reinstallation of tire valve stem caps.

Referring to FIG 2 the tire valve cap-engaging receptacle 10 is attached to the top portion of the elongated cylindrical rod 26. It is comprised of a socket-type cylindrical receptacle approximately 1.3125 inches in length. The top portion 16 of the tire valve cap-engaging receptacle 10 has an external diameter of approximately 1.125 inches tapering inwardly from approximately 1 inch from the top ( ) to an external diameter of approximately .9492 inches at the bottom 22. The cylindrical cavity ( ) of the cap-engaging receptacle 10 has an internal diameter at the top ( ) of approximately .625 inches and increases in diameter to approximately .6875 inches at the bottom ( ). The cap-engaging receptacle 10 is

open at the top () and extends vertically to a height of approximately .750 inches above the top portion () of the elongated cylindrical rod () thereby allowing the valve cap-engaging receptacle 10 to effectively receive and engage tire valve stem caps. Preferably, the tire valve cap-engaging receptacle 10 is manufactured of rubber and is pressed onto the top portion () of the elongated cylindrical rod 12 and substantially affixed by means of adhesive. However, other materials such as metals or plastics may be used and may be attached by other means.

Referring to FIG 3, the main body of the tire valve cap remover consists of an elongated cylindrical rod 12 of approximately 14 inches in length with a diameter () of approximately .6875 inch. Preferably, the elongated cylindrical rod is manufactured of fiberglass. However, the elongated cylindrical rod may be made of other materials such as metal.

Referring to FIG 4. To facilitate the twisting motion needed to remove and reinstall tire valve stem caps, a grip 14 is attached to the bottom portion of the elongated cylindrical rod (). The grip is comprised of a sleeve approximately 5.25 inches in length, having an internal diameter () of approximately .6875 inches and an external diameter () of approximately .6875 inches. Preferably, the grip 14 is manufactured of plastic and attached circumferentially by adhesive to the bottom portion () of the elongated cylindrical rod 12. However, the grip may be made of other materials and attached by different means.

In use, the tire valve cap-engaging receptacle 10 receives the tire valve stem cap and the internal cavity of the socket-type cap-engaging receptacle 10 engages the tire valve stem cap. The tire valve stem cap can then be removed by twisting the elongated cylindrical rod 12 in a counter-clockwise motion. Once the tire valve stem cap has been removed from the valve stem, the socket-type

cap-engaging receptacle 10 retains the tire valve stem cap. The tire valve stem cap can be reinstalled by aligning the retained tire valve stem cap with the tire valve stem and twisting in a clockwise motion.

Accordingly, the reader will see that the present invention can be used to access, loosen, remove, retain, and reinstall the tire valve stem cap that may be difficult without the advantages of the present invention. In addition, the present invention can be used easily and conveniently to access, loosen, remove, retain and reinstall the tire valve stem cap without the need to handle the cap directly. The present invention reduces the amount of direct handling of the cap thereby saving time and unnecessary frustration.

Although the description above contains many specificities, it is not intended to be limiting as to the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. It will be apparent to anyone skilled in the art that the same results could be achieved by using various shapes, designs, or materials, and that the improvements provided by the present invention could be adapted to any conventional tire air pressure gauge or valve stem tool.

Thus, the scope of the invention should be determined by the appended claims rather than by the descriptions and examples given.